

CLAIMS

1. A communication system comprising a data processing apparatus for receiving and processing data and a data providing apparatus for providing data to said data processing apparatus;

wherein said data processing apparatus includes:

button display controlling means for displaying first buttons representing executable functions in a first display format while displaying second buttons representing optional functions in a second display format;

executing means for executing the function represented by any one of said first buttons in response to the applicable first button being operated on;

downloading means which, in response to a download request for software implementing the function represented by any one of said second buttons, downloads said software provided by said data processing apparatus; and

display updating means for updating the display of the second button representing the function implemented by execution of the downloaded software, by displaying the second button in question in said first display format; and

wherein said data providing apparatus includes:

software request receiving means for receiving said download request for said software from said data processing apparatus; and

software transmitting means for transmitting said software to said data processing apparatus in response to said download request for said software.

2. A communication system according to claim 1, wherein said data providing apparatus further comprises new function information transmitting means which, if there exists software for executing any new function, transmits information about said new function to said data processing apparatus; and

wherein said data processing apparatus further comprises new button display controlling means for displaying a new second button representing said new function corresponding to the new function information.

3. A communication system according to claim 1, wherein said data providing apparatus further comprises download history creating means for creating a download history regarding said software downloaded by said data processing apparatus.

4. A communication system according to claim 3, wherein said data providing apparatus further comprises

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- charging means for charging for the downloaded software in keeping with said download history regarding said software transmitted to said data processing apparatus.

5. A communication system according to claim 3, wherein said data providing apparatus further comprises:

category recognizing means for recognizing a category of the software downloaded by said data processing apparatus with high frequency based on said download history; and

user-oriented information transmitting means for transmitting user-oriented information belonging to said category recognized by said category recognizing means; and

wherein said data processing apparatus further comprises user-oriented information display controlling means for displaying said user-oriented information.

6. A data processing apparatus for receiving and processing data from a data providing apparatus, said data processing apparatus comprising:

button display controlling means for displaying first buttons representing executable functions in a first display format while displaying second buttons representing optional functions in a second display format;

executing means for executing the function represented by any one of said first buttons in response to the applicable first button being operated on;

downloading means which, in response to a download request for software implementing the function represented by any one of said second buttons, downloads said software provided by said data providing apparatus; and

display updating means for updating the display of the second button representing the function implemented by execution of the downloaded software, by displaying the second button in question in said first display format.

7. A data processing apparatus according to claim 6, wherein, if there exists software for executing any new function and if said data providing apparatus transmits information about said new function to said data processing apparatus, then said data processing apparatus further comprises new button display controlling means for displaying a new second button representing said new function corresponding to the new function information.

8. A data processing apparatus according to claim 6, wherein, if said data providing apparatus recognizes a

category of software downloaded by said data processing apparatus with high frequency based on a download history regarding the downloaded software and if said data providing apparatus transmits user-oriented information belonging to said category, then said data processing apparatus further comprises user-oriented information display controlling means for displaying said user-oriented information.

9. A data processing method for receiving and processing data from a data providing apparatus, said data processing method comprising the steps of:

displaying first buttons representing executable functions in a first display format while displaying second buttons representing optional functions in a second display format;

executing the function represented by any one of said first buttons in response to the applicable first button being operated on;

in response to a download request for software implementing the function represented by any one of said second buttons, downloading said software provided by said data providing apparatus; and

updating the display of the second button representing the function implemented by execution of the

downloaded software, by displaying the second button in question in said first display format.

10. A program for causing a computer to receive and process data from a data providing apparatus, said program comprising the steps of:

displaying first buttons representing executable functions in a first display format while displaying second buttons representing optional functions in a second display format;

executing the function represented by any one of said first buttons in response to the applicable first button being operated on;

in response to a download request for software implementing the function represented by any one of said second buttons, downloading said software provided by said data providing apparatus; and

updating the display of the second button representing the function implemented by execution of the downloaded software, by displaying the second button in question in said first display format.

11. A data providing apparatus for providing data to a data processing apparatus which receives and processes said data, said data providing apparatus comprising:

software request receiving means for receiving a download request for said software from said data processing apparatus;

software transmitting means for transmitting said software to said data processing apparatus in response to said download request for said software;

download history creating means for creating a download history regarding said software downloaded by said data processing apparatus; and

processing means for performing a relevant process in keeping with said download history.

12. A data providing apparatus according to claim 11, wherein said processing means further comprises charging means for charging for the downloaded software in keeping with said download history regarding said software transmitted to said data processing apparatus.

13. A data providing apparatus according to claim 11, wherein said processing means further comprises:

category recognizing means for recognizing a category of the software downloaded by said data processing apparatus with high frequency based on said download history; and

user-oriented information transmitting means for transmitting user-oriented information belonging to said

category recognized by said category recognizing means.

14. A data providing apparatus according to claim 11, further comprising new function information transmitting means which, if there exists software for executing any new function, transmits information about said new function to said data processing apparatus.

15. A data providing method for providing data to a data processing apparatus which receives and processes said data, said data providing method comprising the steps of:

receiving a download request for said software from said data processing apparatus;

transmitting said software to said data processing apparatus in response to said download request for said software;

creating a download history regarding said software downloaded by said data processing apparatus; and

performing a relevant process in keeping with said download history.

16. A program for causing a computer to provide data to a data processing apparatus which receives and processes said data, said program comprising the steps of:

receiving a download request for software from said

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- data processing apparatus;

transmitting said software to said data processing apparatus in response to said download request for said software;

creating a download history regarding said software downloaded by said data processing apparatus; and

performing a relevant process in keeping with said download history.